

## CLAIM LISTING

1. (Cancelled)

2. **(Currently amended)** A method for treating a disorder, disease or condition benefiting from an increase in mitochondrial respiration; wherein the disorder, disease or condition is selected from the group consisting of obesity, atherosclerosis, hypertension, diabetes, type 2 diabetes, impaired glucose tolerance, dyslipidemia, coronary heart disease, gallbladder disease, osteoarthritis, ~~and cancer~~ **endometrial cancer, breast cancer, prostate cancer, and colon cancer**, comprising administering to a patient in need thereof a therapeutically effective amount of a compound having a slope calculated from the equation

$$X^n = (Y_2 - Y_0) / (Y_1 - Y_0)$$

wherein

$Y_0$  is the degree of stimulation measured as counts per minute (cpm) of radioactivity in control samples without added test compound,

and

$Y_1$  is the degree of stimulation measured as cpm of radioactivity with added test compound in a concentration of  $EC_{50}/2$ ,

$Y_2$  is the degree of stimulation measured as cpm of radioactivity with added test compound in concentration of  $2 \times EC_{50}$ , and

$X$  is 2,

or

$Y_1$  is the degree of stimulation measured as cpm of radioactivity with added test compound in a concentration of  $EC_{50}/3$ ,

$Y_2$  is the degree of stimulation measured as cpm of radioactivity with added test compound in concentration of  $3 \times EC_{50}$ , and

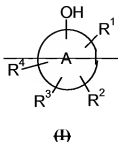
$X$  is 3,

and

$n$  is the slope,

wherein,

the value of the slope  $n$  calculated for the compound is less than the value of the slope  $n$  calculated for carbonylcyanide *p*-trifluoromethoxy-phenylhydrazone as test compound; and wherein the compound is of formula (I)-



wherein



is an aryl, or heteroaryl,

$R^1$  is halogen,  $\text{CHO}$ ,  $\text{CO}_2R^{32}$ ,  $\text{COR}^{32}$ ,  $\text{SO}_3\text{H}$ ,  $\text{CCl}_3$ ,  $\text{CF}_3$ ,  $\text{NO}$ ,  $\text{NO}_2$ ,  $\text{CN}$ ,  $\text{CH=CH-R}^{33}$ ,  $\text{C(R}^{33})(\text{R}^{34})$ ,  $\text{SOR}^{32}$ ,  $\text{SO}_2R^{32}$  or aryl substituted with from one to five substituents selected from halogen,  $\text{CHO}$ ,  $\text{CO}_2R^{32}$ ,  $\text{COR}^{32}$ ,  $\text{SO}_3\text{H}$ ,  $\text{CCl}_3$ ,  $\text{CF}_3$ ,  $\text{NO}$ ,  $\text{NO}_2$ ,  $\text{CN}$ ,  $\text{CH=CH-R}^{33}$ ,  $\text{CH(R}^{33})(\text{R}^{34})$ ,  $\text{SOR}^{32}$ , or  $\text{SO}_2R^{32}$ , wherein

$R^{32}$  is hydrogen, alkyl, aryl, or heteroaryl; and

$R^{33}$  and  $R^{34}$  independently of each other are halogen,  $\text{CHO}$ ,  $\text{CO}_2R^{35}$ ,  $\text{COR}^{35}$ ,  $\text{SO}_3\text{H}$ ,  $\text{CCl}_3$ ,  $\text{CF}_3$ ,  $\text{NO}$ ,  $\text{NO}_2$ ,  $\text{CN}$ ,  $\text{SOR}^{35}$ ,  $\text{SO}_2R^{35}$ , wherein  
 $\text{—R}^{35}$  is hydrogen or alkyl;

and is attached on a carbon atom adjacent to the carbon atom to which the hydroxy group is attached;

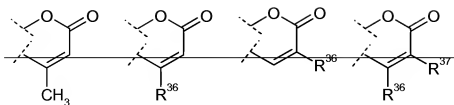
$R^2$  is  $\text{C(X)}$ ,  $\text{NO}_2$ , alkyl, nitro, halogen, alkyl-O-, alkyl-C(O)-, alkyl-C(O)-O-, or aryl, wherein

X is halogen; and

$R^3$  and  $R^4$  independently of each other are hydrogen, alkyl, nitro, halogen, alkyl-O-, alkyl-C(O)-, alkyl-C(O)-O-, or aryl;

or

$R^2$  and  $R^3$  together form one of the diradicals



wherein

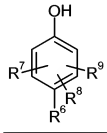
$R^{36}$  and  $R^{37}$ , independently of each other, are hydrogen, halogen,  $C(X)_3$ , nitro, cyano, alkyl, alkyl-O-, alkyl-C(O)-, or aryl; wherein

X is halogen;

and wherein the two valence atoms in the diradical are attached to adjacent carbon atoms; and

$R^4$  is hydrogen, halogen,  $C(X)_3$ , nitro, cyano, alkyl, alkyl-O-, alkyl-C(O)-, or aryl;

of formula (III)



(III)

wherein

$R^6$  is halogen, -CHO, -CO<sub>2</sub>R<sup>43</sup>, -COR<sup>43</sup>, -SO<sub>3</sub>H, -CCl<sub>3</sub>, -CF<sub>3</sub>, -CN, -CH=CH-R<sup>44</sup>, -C(R<sup>44</sup>)(R<sup>45</sup>), -SOR<sup>43</sup>, -SO<sub>2</sub>R<sup>43</sup> or aryl substituted with from one to five substituents selected from halogen, -CHO, -CO<sub>2</sub>R<sup>43</sup>, -COR<sup>43</sup>, -SO<sub>3</sub>H, -CCl<sub>3</sub>, -CF<sub>3</sub>, -NO, -NO<sub>2</sub>, -CN, -CH=CH-R<sup>44</sup>, -CH(R<sup>44</sup>)(R<sup>45</sup>), -SOR<sup>43</sup>, or -SO<sub>2</sub>R<sup>43</sup>, wherein

$R^{43}$  is hydrogen or alkyl; and

$R^{44}$  and  $R^{45}$  independently of each other are halogen, -CHO, -CO<sub>2</sub>R<sup>46</sup>, -COR<sup>46</sup>, -SO<sub>3</sub>H, -CCl<sub>3</sub>, -CF<sub>3</sub>, -NO, -NO<sub>2</sub>, -CN, -SOR<sup>46</sup>, -SO<sub>2</sub>R<sup>46</sup>, wherein

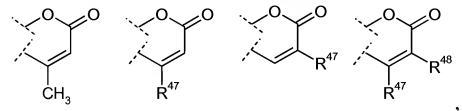
$R^{46}$  is hydrogen, alkyl, or aryl;

$R^7$  is alkyl, nitro, halogen, alkyl-O-, alkyl-C(O)-, or alkyl-C(O)-O-; and

**R<sup>8</sup> and R<sup>9</sup> independently of each other are hydrogen, alkyl, nitro, halogen, alkyl-O-, alkyl-C(O)-, alkyl-C(O)-O-, or aryl;**

**or**

**R<sup>7</sup> and R<sup>8</sup> together form one of the diradicals**



**wherein R<sup>47</sup> and R<sup>48</sup>, independently of each other, are hydrogen, alkyl, nitro, halogen, alkyl-O-, alkyl-C(O)-, or alkyl-C(O)-O-,**

**wherein the two valence atoms in the diradical are attached to adjacent carbon atoms in the phenyl ring; and**

**R<sup>9</sup> is hydrogen, alkyl, nitro, halogen, alkyl-O-, or alkyl-C(O)-;**

or a pharmaceutically acceptable salt, or solvate ~~or prodrug~~ thereof.

3. (Cancelled)
4. (Cancelled)
5. (Previously presented) A method according to claim 2, wherein the condition is obesity.
6. (Previously presented) A method according to claim 2, wherein the disease is type 2 diabetes.
7. (Original) A method according to claim 6, wherein the patient in need thereof is obese.
8. (Withdrawn) A method according to claim 4, wherein the disease is dyslipidemia.
9. (Withdrawn) A method according to claim 8, wherein the patient in need thereof is obese.
10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Previously presented) A method according to claim 2, wherein the compound is a chemical uncoupler.

15. (Previously presented) A method according to claim 2, wherein the compound is a cation.

16. (Cancelled)

17. (Currently amended) A method according to claim 2, wherein the compound is ~~selected from the group consisting of:~~

~~4-methoxy-2-nitrophenol,~~

~~4-hydroxy-3-nitroacetophenone, and~~

~~7-hydroxy-4-methyl-8-nitro-chromen-2-one.~~

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21.- 43. (Cancelled)

44.- 49. (Cancelled)